

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of )  
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Revision of the Commission's )  
Rules to Ensure Compatibility ) CC Docket No. 94-102  
with Enhanced 911 Emergency )  
Calling Systems )

To: The Commission

**PETITION FOR RECONSIDERATION OF VOICESTREAM WAIVER**

The Association of Public-Safety Communications Officials-International, Inc. ("APCO"), pursuant to Section 1.106 of the Commission's rules, hereby petitions for reconsideration of the Commission's grant of a conditional waiver to VoiceStream Wireless ("VoiceStream") regarding the Wireless E9-1-1 rules, 47 C.F.R. §20.18 *et seq.* The waiver was granted as part of the *Fourth Memorandum Opinion and Order*, FCC 00-326, released September 8, 2000 ("*Fourth MO&O*"), in the above-captioned proceeding, which amends those rules. APCO only seeks reconsideration of the VoiceStream waiver, and not of any other aspect of the *Fourth MO&O*.<sup>1</sup>

APCO is the nation's oldest and largest public safety communications organization. Most of APCO's over 15,000 individual members are state or local government employees who manage and operate police, fire, emergency medical,

<sup>1</sup> Although the Commission granted VoiceStream's waiver in the context of a rulemaking proceeding, the grant of the waiver was not itself a rulemaking (though, as APCO notes below, the grant could have the "effect" of a rule change and should not have been considered without public notice and comment). Therefore, Section 1.106(f), not Section 1.429(a), governs a petition for reconsideration of the VoiceStream waiver, and a petition can be filed anytime within 30 days of the release date (September 8, 2000), without regard to the date of *Federal Register* publication. See 47 C.F.R. 1.106(f); 47 C.F.R. 1.4(2).

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forestry conservation, highway maintenance, disaster relief, and other communications systems that protect the safety of life, health and property. These systems include radio communication operations, telecommunications and information networks, and Public Safety Answering Points (PSAPs) that are responding to an increasing number of wireless 9-1-1 calls. APCO has participated throughout this proceeding with the goal of facilitating rapid implementation of wireless enhanced 9-1-1 systems that will allow PSAPs to identify quickly and accurately the location of 9-1-1 calls from wireless telephones.

## **I. INTRODUCTION**

As described in the *Fourth MO&O*, at ¶¶ 51-52, Aerial Communications, Inc., a small Personal Communications System (PCS) licensee, filed a request for waiver in February 1999, of the then-existing Commission rules. Aerial sought authority to use a handset-based location technology in combination with a network-based solution. That request was dismissed as moot when, in October 1999, the Commission modified its rules to allow use of either handset-based or network-based technologies.<sup>2</sup> Aerial did not seek reconsideration of that decision.

However, VoiceStream subsequently acquired Aerial and, through an *ex parte* communication, requested a waiver to permit its PCS systems across the nation to postpone compliance with the implementation deadlines in the Wireless E9-1-1 rules so as to implement a hybrid approach. VoiceStream claimed that existing handset-based and network-based location technologies would not work with GSM, and requested that it be allowed additional time to implement a new hybrid location technology using a

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<sup>2</sup> *Third Report and Order in CC Docket 94-102*, 14 FCC Rcd 17388 (1999).

Network Software Solution (NSS), combined with Enhanced Observed Time Difference of Arrival (E-OTD) technology. Despite the lack of a formal petition for waiver and the absence of an opportunity for public comment, the Commission nevertheless granted VoiceStream a waiver on its own motion as part of the *Fourth MO&O*.<sup>3</sup> The waiver provides that VoiceStream will first have to meet the network-based accuracy standard, but only for 50 percent of newly activated handsets, and then meet the handset-based accuracy standard thereafter, but at a slower, more graduated pace than other carriers electing a handset option. In the meantime, VoiceStream must also implement NSS location accuracy of 1,000 meters for 67 percent of all calls on its system.

For the reasons discussed below, APCO urges the Commission to reconsider its grant of the VoiceStream waiver. The waiver appears to reward noncompliance, is unsupported by the record, and establishes dangerous precedent that could undermine the Commission's progress in promoting wireless E9-1-1 solutions.

## **II. The Waiver Should Not Have Been Considered Without An Opportunity For Public Notice and Comment.**

The VoiceStream waiver will have far-reaching implications for millions of wireless subscribers and for the public at large. This is not a waiver that impacts just a small licensee in a few isolated markets. VoiceStream has consolidated ownership of PCS licensees in 23 of the nation's 25 largest markets, and competes head-to-head with the likes of AT&T Wireless, Sprint PCS, and Verizon Wireless. Thus any "waiver" for a carrier of that size and influence has the effect of carving out a major exception to the

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<sup>3</sup> See *Fourth MO&O* at ¶¶ 51-68.

rules and should not be undertaken without at least some effort by the Commission to solicit and review public input through a notice and comment proceeding. The VoiceStream waiver also creates a clear precedent for other carriers to follow by establishing an explicit alternative method and schedule for compliance with the wireless E9-1-1 requirements. As Commissioners Ness and Tristani note in their Joint Separate Statement, the waiver thus “may have the effect of a rule change” and “should have warranted public notice and ample public scrutiny and consideration.”<sup>4</sup> Finally, the VoiceStream waiver, far more than most Commission actions, has a direct and serious effect on the safety of life, health and property for millions of Americans. On that basis alone, the Commission should not have considered the waiver without a full public airing.

### **III. The VoiceStream Waiver Establishes a Dangerous Precedent.**

VoiceStream has had ample opportunity to prepare for timely compliance with the wireless E9-1-1 rules. While VoiceStream’s GSM operation is different in certain respects from the CDMA and TDMA operations of other U.S. carriers, there are location technologies available and in use in Europe, where GSM is the dominant wireless mode of operation. There does not appear to be any compelling, well-documented evidence

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<sup>4</sup> The Commission has often noted that “although the Commission has wide latitude to choose whether it will proceed by adjudication (e.g., waiver proceedings) or by rulemaking, it is nevertheless the case that guidance from the courts indicates that issues of general applicability are more suited to rulemaking than to adjudication.” *Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band*, Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rule Making, 12 FCC Rcd. 12545, at ¶ 388 (Mar. 13, 1997), citing *National Small Shipment Traffic Conf. v. I.C.C.*, 725 F.2d 1442, 1447-48 (D.C. Cir. 1984). It follows, therefore, that adjudication (e.g., waiver proceedings) which has the effect of rulemaking should, at minimum, be subject to notice and comment similar to that required for rulemaking under the Administrative Procedures Act.

that no alternative (including assisted GPS and uplink TOA) exists for GSM.

VoiceStream has argued that those alternatives are unproven, but the same can be said of its own preferred solution, NSS/E-OTD. Aerial based its initial waiver request on the argument that incurring the cost of a network-based solution would disadvantage a smaller carrier.<sup>5</sup> However, VoiceStream, with a nationwide footprint, and potentially an international parent, is unlikely to qualify as a “smaller carrier.”

In any event, VoiceStream could have pursued and fully tested its NSS/E-OTD technology (or some other location technology) long ago, eliminating the need for time extension beyond that allowed for its competitors. Instead, it appears that VoiceStream simply “bought” the Aerial approach, which raises the issue of what, if anything, VoiceStream had done previously to pursue an E9-1-1 solution. In short, the Commission’s action has the appearance of rewarding non-compliance, rather than of drawing a line and enforcing its rules. That message will give solace to other carriers who may be even less inclined to meet the Commission’s deadlines.

A critical flaw in the Commission’s analysis of the VoiceStream proposal is the relative importance placed on VoiceStream’s use of a network software solution (NSS) to provide a “safety net” until such time as it is able to modify subscriber handsets to add the E-OTD capability. VoiceStream has not provided any documented evidence to support its accuracy claims for NSS. Rather, VoiceStream has merely asserted that NSS will provide “better than Phase I accuracy” by locating callers with an accuracy and reliability of 1000 meters, or better, for 67 percent of calls.<sup>6</sup> However, as recently noted

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<sup>5</sup> Aerial Communications, Inc. Petition to Waive Section 20.18(e) of the Commission’s Rules (Feb. 5, 1999), at ¶7.

<sup>6</sup> *Ex Parte* Letter from VoiceStream Wireless to the Commission, dated July 31, 2000.

by the International Association of Chiefs of Police (“IACP”), “public safety responders...will receive little, if any, benefit from this offering.”<sup>7</sup> Especially in urban and suburban settings, a 1000 meter accuracy level (67% of the time) is not a meaningful improvement over Phase I cell site information. One thousand meters (or 3,280 feet) can easily cover a distance of eight or more city blocks and dozens of buildings and residences.<sup>8</sup> Finding a 9-1-1 caller within that area would still be extremely difficult and time-consuming and, frankly, not much better in most cases than having cell site information alone.

What makes the NSS safety net especially worrisome is that it could be the only way to find VoiceStream’s customers if its E-OTD technology does not live up to VoiceStream’s stated, but unproven, expectations. While APCO does not purport to have expertise in location technology, VoiceStream’s extremely limited test data appears to pose more questions than it answers. For example, the Houston trial, conducted in an area claimed by VoiceStream to represent where “more than 70 percent of E9-1-1 calls” originate, covers a mere 0.5% of the geography of Harris County, Texas. Yet, it was clearly an optimum suburban area with little or no terrain variation, and the unsubstantiated claim regarding the representative nature of the environment was completely presumptive. The record does not reflect whether the test area, a mere

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<sup>7</sup> *Ex parte* Letter from International Association of Chiefs of Police to the Commission, dated September 1, 2000.

<sup>8</sup> As a point of reference, one square kilometer would roughly cover the area of the FCC’s headquarters building North to Constitution Avenue, East to 4<sup>th</sup> Street, South to 4<sup>th</sup> and E Streets, SW, and West back to the FCC. That area is a mix of open space, roadways, and buildings, including the Museum of Natural History, the National Gallery of Art, the Air & Space Museum, other Smithsonian buildings, various Federal office buildings, including the Department of Transportation, the Department of Housing and Urban Development, the Forrestal Federal Building, and the entire L’Enfant Plaza complex.

0.00024% of the total United States, is representative of VoiceStream's service area, which, after completion of the Powertel merger, purportedly will own licenses to serve nearly 250 million POPs.<sup>9</sup> How will E-OTD work in dense urban environments, hills and valleys, rural areas, along major highways and in otherwise lightly populated regions? How will E-OTD work under non-stationary conditions?<sup>10</sup> Aerial itself noted "the multipath effects that are commonly seen in the radio environment, especially in urban environments, will cause a degradation in the accuracy..."<sup>11</sup> The Houston study also does not indicate whether reaching those results required cell site modification. If so, can VoiceStream realistically modify all of its cell sites in the time frame that it proposed, and has VoiceStream committed itself to the substantial cost of those modifications? How are those costs different from what VoiceStream would face with other technologies?

All of these issues raise considerable doubt as to whether VoiceStream is likely to be able to provide 50 meter accuracy in most environments, and even 100 meter accuracy is questionable. The Commission itself is obviously and justifiably concerned about the lack of evidence, and has required VoiceStream to submit regular reports (including one on October 1, 2000) of its progress. However, that evidence should have been submitted before, not after, the grant of a waiver.

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<sup>9</sup> See VoiceStream Wireless website, [www.voicestream.com](http://www.voicestream.com).

<sup>10</sup> The August 9, 2000, data submitted in VoiceStream's August 29, 2000, ex parte submission appears to reflect only stationary test conditions.

<sup>11</sup> Aerial Communications, Inc. Petition to Waive Section 20.18(e) of the Commission's Rules (Feb. 5, 1999), at ¶20.

Furthermore, the initial reporting requirements imposed on VoiceStream are vague, without any clear objective criteria for Commission evaluation. All that is required is that VoiceStream report “on its experience with NSS and E-OTD, including actual deployment and the results of all tests and trials.” No objective benchmarks for E-OTD apply for at least another year, and 50 meters accuracy does not have to be implemented until October 1, 2003. While the Commission claims that it will revoke the waiver should VoiceStream fail to make progress in the interim, doing so will be extraordinarily difficult without express objective benchmarks. The Commission will face inevitable claims from VoiceStream that it has invested extensive time and resources on the NSS NSS/E-OTD approach and should be allowed to “keep trying.”

Perhaps the most telling failing of the VoiceStream waiver is that it does not even satisfy the test that the Commission established in the *Fourth MO&O* for consideration of future waivers.<sup>12</sup> For example, the Commission stated that carriers seeking waivers should “undertake concrete steps necessary to come as close as possible to full compliance” and should “document their efforts aimed at compliance” which includes “solutions they considered and explain why none could be employed in a way that complies with the Phase II rules.” The Commission received no such documentation, by either Aerial or VoiceStream, prior to granting the VoiceStream waiver. Carriers are also warned by the Commission that they “should not expect to defer providing a location solution if one is available and feasible” and that if “a carrier’s preferred location solution is not available or will not fully satisfy the rules, in terms of accuracy and reliability or timing, the carrier would be expected to implement another solution that does comply

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<sup>12</sup> *Fourth MO&O* at ¶¶44-45.



with the rules.” The evidence is far from clear in this case that NSS/E-OTD is the only solution available to VoiceStream or that it is anything more than its “preferred solution.” More than 18 months ago, even Aerial referenced the existence of a network-based solution, expressing concern only about the solution’s cost, not its availability or performance.<sup>13</sup>

The Commission warns in the *Fourth MO&O* that it may assess “appropriate penalties on carriers that fail to comply.” However, if the Commission keeps saying that it “may” impose penalties, but shrinks from actually doing so, carriers will no longer fear the consequences of non-compliance and/or will simply seek a waiver. The grant of the VoiceStream waiver, especially based on a thin record and without public comment, will give carriers further comfort in that regard.

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<sup>13</sup> Aerial Communications, Inc. Petition to Waive Section 20.18(e) of the Commission’s Rules (Feb. 5, 1999), at ¶4.

## CONCLUSION

For the reasons discussed above, the Commission should reconsider its grant of a waiver to VoiceStream.

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I, Annette M. Mercer, legal secretary in the law office of Shook, Hardy & Bacon LLP, do hereby certify that on this 20th day of September, 2000, a copy of the foregoing document, "Petition for Reconsideration of Voicestream Waiver" was mailed, postage pre-paid, to the following:

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